



Climate, water management, and policy in the San Pedro Basin: Results of a survey of Mexican stakeholders near the U.S.-Mexico border

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Abstract:

This paper reviews regional climate knowledge and vulnerability in the northern Mexico San Pedro River Basin, with a focus on water quality, quantity, and management issues on the Mexican side of the border. A discussion based on the available literature is supplemented by a survey assessing concerns about water and the quality and usability of climate and hydrologic information available to water managers and communities. The surveys indicate that the central concern for urban residents is the lack of reliable potable water due to frequent service breakdowns-with climate change and variability, specifically drought and high temperatures, as contributing factors. Water managers desire appropriate meteorological and hydrologic information to improve planning strategies, but access to this information remains limited. Considerable disagreement exists about who should pay for previously free or low-cost water and wastewater treatment. Urban users have little incentive to conserve because of the present flat, low rate and frustration with service. In rural areas, while a majority of ranchers recognize that variable climate and water loss could increasingly jeopardize their lifestyle, they seldom use meteorological information in planning or modify their water consumption. Climate vulnerability also includes potential for serious environmental health issues due to the presence of heavy metals and organic contaminants in the San Pedro.

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Resource Description

Communication:

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience:

audience to whom the resource is directed

Policymaker, Public

Other Communication Audience: Water managers

Exposure :

Climate Change and Human Health Literature Portal

weather or climate related pathway by which climate change affects health

Food/Water Quality, Food/Water Security, Precipitation

Food/Water Quality: Other Water Quality Issue

Water Quality (other): Heavy metals;Organic contaminants

Geographic Feature: 

resource focuses on specific type of geography

Freshwater, Rural, Urban, Other Geographical Feature

Other Geographical Feature : Basin

Geographic Location: 

resource focuses on specific location

Non-United States

Non-United States: Non-U.S. North America

Health Impact: 

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Mitigation/Adaptation: 

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: 

populations at particular risk or vulnerability to climate change impacts

Low Socioeconomic Status

Resource Type: 

format or standard characteristic of resource

Research Article

Timescale: 

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: 

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content